

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Ful #

Application of:

Liu, et al.

Serial No.: 10/608,404

Confirmation No.: 7966

Filed:

June 26, 2003

For:

Method and Composition

For Polishing A Substrate

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Group Art Unit: 1765

Examiner: Michael P. Alexander

MAIL STOP AMENDMENT Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

Dear Sir:

CERTIFICATE OF MAILING 37 CFR 1.8

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August 4, 2005

ate Brian K

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The Applicants, and the Attorney who signs below on the basis of the information supplied by the inventor and the information in his file, submit herewith patents, publications, or other information of which they are aware, which may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR § 1.56.

While the information submitted in this Supplemental Information Disclosure Statement may be material pursuant to 37 CFR § 1.56, it is not intended to constitute an admission that any patent, publication, or other information referred to therein is prior art for this invention unless specifically designated as such.

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08/09/2005 CNGUYEN2 00000049 200782 10608404

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The patents and/or publications submitted herewith are set forth on the attached Form PTO-1449.

The Commissioner is hereby authorized to charge the sum of \$180.00 due under 37 CFR § 1.17(p) pursuant to § 1.97, and any other fee necessary to make this submission timely, to the Deposit Account No. 20-0782/AMAT/5699.P3/BKH.

Respectfully submitted,

Brian K. Hrna

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Sheet of 3

Complete if Known			
Application Number	10/608,404		
Filing Date JUNE 26, 2003			
First Named Inventor LIU, et al.			
Art Unit 1742			
Examiner Name MICHAEL P. ALEXANDER			
Attorney Docket Number	AMAT/5699.P3/CMP/CMP/RKK		

	U.S. PATENT DOCUMENTS					
Examiner Cite	Cite	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of	Pages, Columns, Lines, Where Relevant	
Initials *		Number - Kind Code ² (if known)		Cited Document	Passages or Relevant Figures Appear	
	A1	US-6,893,476	5/17/2005	6,893,476		
	A2	US-2001/0016469	8/23/2001	Chopra		
	А3	US-2001/0052351	12/20/2001	Brown, et al.		
	A4	US-2002/0016064	2/7/2002	Komai, et al.		
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Examiner Initials*	Cite No. ¹	Foreign Patent Document Country Code ³ - Number ⁴ - Kind Code ⁵ (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	Т ⁶
	B1	EP 0 699 782	3/6/1996	Datta		
	B2	EP 1 167 585	1/2/2002	Hong		
	В3	JP 05 302199 (English abstract)	11/16/1993	Bridgestone Bekaert Steel		Х
	B4	JP 06 158397 (English abstract)	6/7/1994	Asahi Glass Co Ltd		Х
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	B7	JP 58-093899 (English abstract)	6/8/1983	Sumitomo Metal Land Ltd		X
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	B9	JP 2000 192298 (English abstract)	7/11/2000	Ebara		Х
	B10	JP 2000 256898 (English abstract)	9/19/2000	Permelec Electrod Ltd		Х
	B11	SU 1 618 538 (English abstract)	1/7/1991	Vladimir		X
	B12	WO 02/88229	11/7/2002	Beulich, et al.		
	B13	WO 02/75804	9/26/2002	Chen		
	B14	WO 02/23616	3/21/2002	Wang		
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Attorney Docket Number

Substitute for form 1449A/PTO Complete if Known Application Number 10/608,404 SUPPLEMENTAL INFORMATION JUNE 26, 2003 Filing Date DISCLOSURE First Named Inventor LIU, et al. STATEMENT BY APPLICANT Art Unit 1742 (Use as many sheets as necessary) MICHAEL P. ALEXANDER Examiner Name

		NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	C1	International Search Report for PCT/US02/40754 dated August 5, 2003. (AMAT/5998PC)	
	C2	PCT International Search Report for PCT/US04/17691, dated November 16, 2004. (AMAT/5699.PC03)	-
	C3	PCT Written Opinion for PCT/US04/17691, dated November 16, 2004. (AMAT/5699.PC03)	
	C4	Besser et al., "Mechanical Strain Evolution in Cu/low K Interconnect Lines", <i>Mat. Res. Soc. Symp. Proc.</i> Vol. 795, 2004 Materials Research Society, pp. U1.1.1-U1.1.6.	
	C5	Chandrasekaran, et al., "Effects of CMP Process Conditions on Defect Generation in Low-k Materials", <i>Journal of The Electrochemical Society</i> , pp. G882-G889 (2004).	
	C6	Chang, et al., "Microleveling Mechanisms and Applications of Electropolishing of Planarization of Copper Methalization", J. <i>Vac. Sci. Technol. B</i> 20(5), Sep/Oct 2002, pp. 2149-2152.	
	C7	Chang, et al., "Superpolishing of Planarizing Copper Damascene Interconnects", Electrochemical and Solid-State Letters, pp. G72-G74 (2003).	
	C8	Contolini, et al., "Electrochemical Planarization for Multilevel Metallization", <i>J. Electrochem. Soc.</i> , Vol. 141, No. 9, September 1994, pp. 2503-2510.	
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Examiner	Date	
Signature	Considered	

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	C12	Kaufman, et al., "Chemical-Mechanical Polishing for Fabricating Patterned W Metal Features as Chip Interconnects", <i>J. Electrochem. Soc.</i> , Vol. 138, No. 11, November 1991; The Electrochemical Society, Inc. pp. 3460-3465.	
	C13	Kondo, et al., "Role of Additives for Copper Damascene Electrodeposition: Experimental Study on Inhibition and Acceleration Effects", <i>Journal of The Electrochemical Society</i> , pp. C250-C255 (2004)	
	C14	Padhi, et al., "Planarization of Copper Thin Films by Electropolishing in Phosphoric Acid for ULSI Applications", Journal of the Electrochemical Society, 150, pp. G10-G14 (2003).	
	C15	Qafsaoui, et al., "Quantitative Characterization of Protective Films Grown on Copper in the Presence of Different Triazole Derivative Inhibitors", <i>Electrochimica Acta 47 (2002)</i> , pp. 4339-4346.	
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	C17	Tromans, et al., "Growth of Passivating CuBTA Films on Copper in Aqueous Chloride/Benzotriazole Solutions", <i>Electrochemical and Solid-State Letter</i> , V. 5, pp. B5-B8 (2002).	
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Examiner	Date	
Signature	Considered	

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